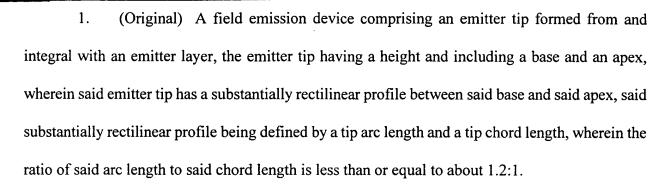
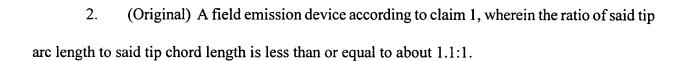
AMENDMENTS TO THE CLAIMS





- 3. (Original) A field emission device according to claim 1, wherein the ratio of said tip arc length to said tip chord length is less than or equal to about 1.05:1.
- 4. (Original) A field emission device according to claim 1, wherein the ratio of said tip arc length to said tip chord length is less than or equal to about 1.01:1.



5. (Original) A field emission device comprising:

an emitter layer including an emitter tip that has a height and including a base and an apex, wherein said emitter tip has a rectilinear profile between said base and said apex that is defined by a tip arc length and a tip chord length, wherein the ratio of said arc length to said chord length is less than or equal to about 1.2:1;

a substrate; and

a cathode conductive layer disposed over said substrate, said emitter tip being disposed over said cathode conductive layer.

6. (Original) A field emission device according to Claim 5, further comprising: a conductive gate structure disposed over said cathode conductive layer; an aperture through said conductive gate structure, said emitter tip being exposed within said aperture; and an anode panel positioned over said conductive gate structure and said emitter tip.

7. (Original) A field emission device according to Claim 6, wherein said anode plane comprises:

an anode conductive layer;

a phospholuminescent panel for emitting light upon being excited by electrons; and a transparent panel. 8. (Original) A flat panel display device comprising:

a substrate;

a cathode conductive layer disposed over said substrate;

an array of emitter tips each formed from an emitter layer disposed over said substrate, each of said emitter tips having a height and including a base and an apex, each of said emitter tips having a substantially rectilinear profile between said base and said apex that is defined by a tip arc length and a tip chord length, wherein the ratio of said arc length to said chord length is less than or equal to about 1.2:1;

a conductive gate structure disposed over said cathode conductive layer;

an array of apertures formed through said conductive gate structure, each of said emitter tips being exposed through one of said apertures; and

an anode panel for emitting light in response to electrons emitted from said array of emitter tips.

9. (Currently Amended) A field emission device comprising:

a substrate;

a cathode conductive layer disposed over said substrate; and

an emitter tip integral with <u>and etched entirely from</u> an emitter layer disposed over said cathode conductive layer and having a base <u>plane</u> adjacent to the emitter layer, an apex, and a continuously concave exterior surface extending from the base <u>plane</u> to the apex.

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10. (Original) A field emission device according to Claim 9, further comprising: a conductive gate structure disposed over said cathode conductive layer; an aperture through said conductive gate structure, said emitter tip being exposed within said aperture; and

an anode panel positioned over said conductive gate structure and said emitter tip.

11. (Original) A field emission device according to Claim 10, wherein said anode panel comprises:

an anode conductive layer;

a phospholuminescent panel for emitting light upon being excited by electrons; and a transparent panel.

12. (Currently Amended) A field emission device comprising:

a substrate;

a cathode conductive layer disposed over said substrate; and

a monolithic an emitter tip projecting from and integral with an emitter layer disposed over said cathode conductive layer and having a base <u>plane</u> adjacent to the emitter layer, an apex, and an exterior surface, said exterior surface having a substantially paraboloid vertical profile that extends from the base <u>plane</u> to the apex.

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13. (Original) A field emission device according to Claim 12, further comprising: a conductive gate structure disposed over said cathode conductive layer; an aperture through said conductive gate structure, said emitter tip being exposed within said aperture; and

an anode panel positioned over said conductive gate structure and said emitter tip.

14. (Original) A field emission device according to Claim 13, wherein said anode panel comprises:

an anode conductive layer;

- a phospholuminescent panel for emitting light upon being excited by electrons; and a transparent panel.
- 15. (Currently Amended) A field emission device comprising:

a substrate;

a cathode conductive layer disposed over said substrate; and

an emitter tip that is an integral portion of a single emitter layer disposed over said cathode conductive layer and having a base <u>plane</u> adjacent to the emitter layer, an apex, and an exterior surface, said exterior surface having an ovoid profile that extends from the base <u>plane</u> to the apex, wherein the emitter tip and the single emitter layer are formed of a single material.

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16. (Original) A field emission device according to Claim 15, further comprising: a conductive gate structure disposed over said cathode conductive layer; an aperture through said conductive gate structure, said emitter tip being exposed within said aperture; and

an anode panel positioned over said conductive gate structure and said emitter tip.

17. (Original) A field emission device according to Claim 16, wherein said anode panel comprises:

an anode conductive layer;

- a phospholuminescent panel for emitting light upon being excited by electrons; and a transparent panel.
- 18. (Currently Amended) A field emission device comprising an emitter tip formed from an emitter layer, the emitter tip having a height and including a base <u>plane</u> and an apex, wherein said emitter tip is generally conical and has a substantially rectilinear profile between said base <u>plane</u> and said apex, and wherein the emitter tip and the single emitter layer are formed of a single material.
- 19. (Original) A field emission device according to Claim 18, wherein said substantially rectilinear profile is defined by a tip arc length and a tip chord length, wherein the ratio of said arc length to said chord length is less than or equal to about 1.2:1.



20. (Previously Amended) A flat panel display device comprising:

a substrate;

a cathode conductive layer disposed over said substrate;

an array of <u>monolithic</u> emitter tips formed as a part of an emitter layer disposed over said substrate, each of said emitter tips having a height and including a base <u>plane</u> adjacent to the emitter layer and an apex, each of said emitter tips having an exterior surface, said exterior surface having a profile with a continuous shape that extends from the base <u>plane</u> to the apex, said continuous shape being selected from the group consisting of a concave shape, a substantially paraboloid shape, and an ovoid shape;

a conductive gate structure disposed over said cathode conductive layer;

an array of apertures formed through said conductive gate structure, each of said emitter tips being exposed through one of said apertures; and

an anode panel for emitting light in response to electrons emitted from said array of emitter tips.